MagPure Fast Blood DNA Kit

Introduction

This product provide fast and easy methods for purification of total DNA from whole blood, saliva, swab soak solution, other body fluids, lymphocytes and cultured cells. There is no need to use toxic phenol chloroform extraction or time-consuming alcohol precipitation. The extraction process finish in 40 minutes. Purified DNA includes genomic DNA, mitochondrial DNA, viral DNA (e.g. HBV), or DNA from other parasitic microorganisms. The obtained DNA can be directly used in PCR, viral DNA detection and other experiments.

This kit can use on manual protocol or 16/32/48 channel automated extraction system.

Bottle Reagent Kit Contents

Product	D631000C	D631001C	D631002C	D631003C
Preps per Kit	20 Preps	48 Preps	96 Preps	480 Preps
MagPure Particles	1.1 ml	1.7 ml	3.5 ml	16 ml
Proteinase K	12 mg	24 mg	50 mg	220 mg
Protease Dissolve Buffer	1.8 ml	1.8 ml	3 ml	15 ml
Buffer MLA	15 ml	30 ml	70 ml	300 ml
Buffer MWX1	15 ml	30 ml	70 ml	300 ml
Buffer DW1	15 ml	30 ml	70 ml	300 ml
Buffer EW	30 ml	60 ml	120 ml	2 x 300 ml
Elution Buffer	5 ml	10 ml	20 ml	60 ml

Storage and stability

Proteinase K Powder should be stored at 2–8°C upon arrival. However, short-term storage (up to 12 weeks) at room temperature (15–25°C) does not affect their performance. The remaining kit components can be stored at room temperature (15–25°C) and are stable for at least 18 months under these condition.

Preparation

- Add 0.6 ml (D631000C) or 1.2 ml (D631001C), 2.5 ml (D631002C) or 11ml (D631003C) Protease Dissolve Buffer to the bottle of Proteinase K and store at -20~8°C after dissolve.

Protocol 1. single tube operation

Materials or device need

- 65~70°C shaking water bath
- 75% ethanol

1. Add 20µl Proteinase K Solution and 30µl MagPure Particles in a new1.5ml centrifuge.
2. Add 200~300µl samples into the tube. Recommend sample size: blood (200 to 300µl), concentrated blood (200µl), saliva (300µl), swab soak solution (300µl), homogenate solution (200 to 300µl), digestive solution (300µl), cell suspension (200µl), ect.
3. **Add 600µl Buffer MLA to the sample,** vortex for 10~15 seconds to mix throughly. Stay at room temperature for 10 minutes with occasionally inverting to mix well. Place the tube to the magnetic stand for 1 minute until the beads have form a tight pellet. Then remove the supernatant.
4. **Add 600µl Buffer MWX1 to the sample,** vortex for 15 seconds. Place the tube to the magnetic stand for 1 minute. Then remove the supernatant.
5. **Add 600µl Buffer DW1 to the sample,** vortex for 15 seconds. Place the tube to the magnetic stand for 1 minute. Then remove the supernatant.
6. **Add 600µl Buffer EW to the sample,** vortex for 15 seconds. Place the tube to the magnetic stand for 1 minute. Then remove the supernatant.
7. Repeat Step 6 once.
8. Centrifuge shortly to collect liquid on the tube. Place the tube to the magnetic stand and

remove all the liquid carefully. Open the lid and air dry for 10 minutes..

9. **Add 100μl Elution Buffer to the sample,** re-suspend the beads by vortex. Incubate at 55℃ for 10 minutes with high speed shaking (>1000rpm).
10. Place the tube to the magnetic stand for 2 minutes. Transfer the supernatant containing purified DNA to a clean 1.5ml centrifuge tube.

Protocol 2: 32/48 channel nuclear acid extraction machine.

1. Add the reagents to the 96 well plate following the bellow tables.

Reagent per well
Row 1/7：600μl Buffer MLA
Row 2/8：600μl Buffer MWX1
Row 3/9：600μl Buffer DW1
Row 4/10：30μl MagPure Particles , 600μl Buffer EW
Row 5/11：600μl Buffer EW
Row 6/12：100μl Elution Buffer

2. **Add 200~300μl samples into the hole of Row 1 and 7.** Recommend sample size: blood (200 to 300μl), concentrated blood (200μl), buffy coat (200μl), saliva (300μl), swab soak solution (300μl), homogenate solution (200 to 300μl), digestive solution (300μl), cell suspension (200μl), ect.
3. Add 20μl Proteinase K Solution into sample hole.
4. Insert the magnetic tip (TL-Tip) and 96-well plate in to the machine (hole A1 is placed at the left inner corner). Turn on the machine and start the program.
5. The extraction proceed in ~ 40 minutes.
6. Remove the 96-well plate and magnetic tip.
7. Transfer the purified DNA into a new 1.5ml centrifuge tube and store at -20~8℃.

【Mag Pure 32/48 Extractor program recommendation】

Num	Well	Name	Wait (min)	Mix (min)	Magnet (sec)	Mix	Volume /ul	Temp.
1	4	Magnet	0	0.2	60	7	600	Close
2	1	Bind	0	12	60	7	800	55℃
3	2	Wash 1	0	2	60	9	600	Close
4	3	Wash 2	0	4	60	9	600	Close
5	4	Wash 3	0	2	60	8	600	Close
6	5	Wash 4	0	1	90	8	600	Close
7	6	Dry	5min	0	0	0	0	Close
8	6	Elute	0	14	90	10	150	55℃
9	4	Drop	0	0.2	0	7	600	Close